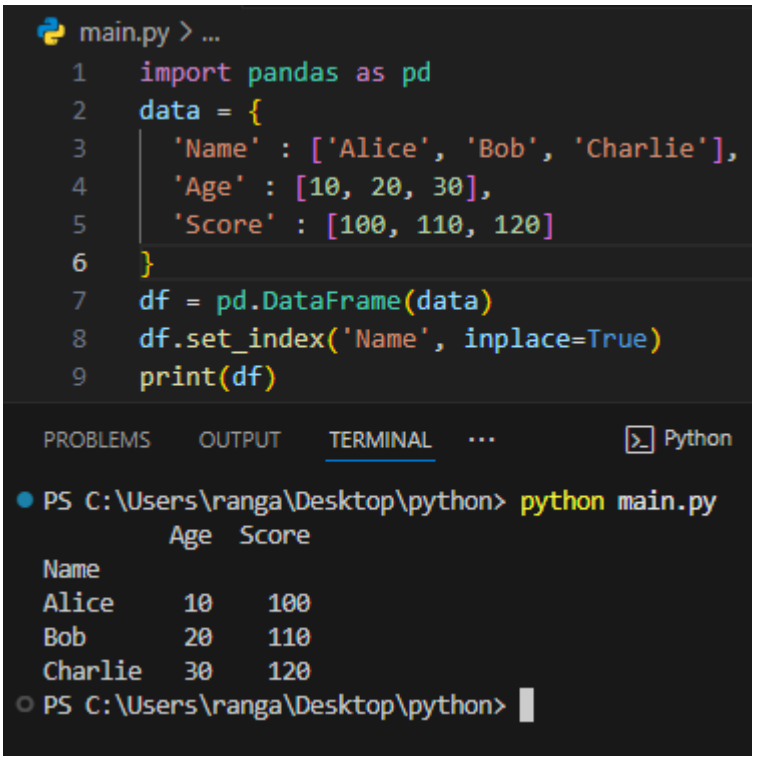
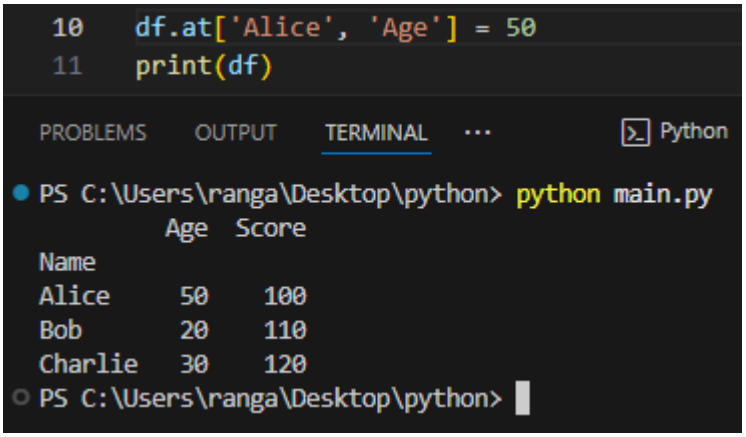
3. Modifying Series and DataFrames



1. `at` method

`at` is label-based.
Used to access values in a DataFrame and modify them by their labels using `at` method.

```
df.at['Alice', 'Age'] = 50
```



2. `iat` method

`iat` is integer position-based.
Used access values in a DataFrame and modify them by their index using `iat` method.

```
df.iat[1,1] = 0
```

```
10  df.at['Alice', 'Age'] = 50
11  df.iat[1, 1] = 0
12  print(df)
```

```
PROBLEMS  OUTPUT  TERMINAL  ...  Python
PS C:\Users\ranga\Desktop\python> python main.py
         Age  Score
Name
Alice     50    100
Bob       20      0
Charlie   30    120
PS C:\Users\ranga\Desktop\python>
```

3. Adding a column

```
df[newColumnName] = [..Values..]
```

```
10  df['Rating'] = [1, 2, 5]
11  print(df)
```

```
PROBLEMS  OUTPUT  TERMINAL  ...  Python
PS C:\Users\ranga\Desktop\python> python main.py
         Age  Score  Rating
Name
Alice     10    100       1
Bob       20    110       2
Charlie   30    120       5
PS C:\Users\ranga\Desktop\python>
```

4. Adding rows

First create a new DataFrame with desired rows, then concatenate the original DataFrame and the new one.

Ex: Add a new player called 'David'(index) with age of 20 and 95 scores.

```
10  new_row = pd.DataFrame(
11      {'Age': [25], 'Score': [95]}, index=['David']
12      )
13  df = pd.concat([df, new_row])
14  print(df)
```

```
PROBLEMS  OUTPUT  TERMINAL  ...  Python
PS C:\Users\ranga\Desktop\python> python main.py
         Age  Score
Alice     10    100
Bob       20    110
Charlie   30    120
David     25     95
PS C:\Users\ranga\Desktop\python>
```

5. `drop` method

`drop` is used to remove Columns and Rows from a DataFrame.
In the `drop` method, it requires to mention in which axis we need to perform the delete operation.

```
axis=1 (Indicates Y axis, columns)
axis=0 (Indicates X axis, rows)
```

Ex: Delete Bob's records.

```
10  df.drop('Bob', axis=0, inplace=True)
11  print(df)
```

```
PROBLEMS  OUTPUT  TERMINAL  ...  Python
PS C:\Users\ranga\Desktop\python> python main.py
         Age  Score
Name
Alice     10    100
Charlie   30    120
PS C:\Users\ranga\Desktop\python>
```

Ex: Delete Age column